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EXAMINER

CANTELMO, GREGG

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/909,359	KEY ET AL.	
	Examiner	Art Unit	
	Gregg Cantelmo	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the amendment received October 17, 2003:
 - a. Claims 1-12 are pending with claim 12 withdrawn from consideration to a non-elected invention;
 - b. The 112 second paragraph rejection is withdrawn in light of the amendment;
 - c. The prior art rejections of record are withdrawn.

Election/Restrictions

2. Applicant's election of Group I in Paper No. 4 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

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4. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. patent No. 4,317,871 (Wolf).

Wolf discloses a battery terminal to be secured to a battery case comprising: a terminal assembly extending along a main axis and including a threaded insert a threaded bore and an outer metal portion having a base with an annular flange configured to engage an inner surface of the case 11; a ring configured to be disposed over said terminal assembly; and an anti-rotation system including first set of angularly-spaced bosses 24 with intervening slots (defined by the edges 23) formed on an outer surface of the case 11, a second set of angularly-spaced bosses 26 with intervening slots on a first side of said ring facing said case and 11 which are complementary with said first set of bosses and slots, and a set of recesses 14 on a second side of said ring opposite said first side configured to receive portions of said terminal assembly (Figs. 1-3 as applied to claim 1).

Portions of said terminal assembly to be received into said set of recesses comprise end portions of an annular wall of said terminal assembly (Figs. 1-3 as applied to claim 2).

The annular wall is at least in part deformed into said set of recesses (Fig. 3 as applied to claim 3).

The annular wall is orbitally spin riveted (Figs. 1-3 and col. 2, ll. 12-56 as applied to claim 4).

The outer metal portion of said terminal assembly comprises lead (abstract as applied to claim 5)

Response to Arguments

5. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

It is additionally noted that applicant's arguments as to the number of bosses and recesses, as argued, is not consistent with the scope of the instant claims. More clearly, the claims do not positively limit to two sets of bosses and recesses as argued, but only to one set of bosses and recess and a second set of recesses configured to receive portions of the terminal assembly.

While such language may include a second set of bosses and recesses, the scope of the claims are not limited to such. Therefore arguments to the number of bosses and recesses are not persuasive.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf in view of U.S. patent No. 5,663,015 (Hooke).

The teachings of claim 1 have been discussed above and are incorporated herein

The battery terminal further includes a sealing system, said sealing system comprising: an annular groove circumferentially extending in said flange on a side configured to engage said inner surface of said case (Figs. 3-5); a seal 37 configured to be disposed in said groove to form a seal between said inner surface of said case and said terminal assembly; and a sealant material disposed between said first side of said ring and said case (Fig. 3 as applied to claim 6).

The differences between the instant claims and Wolf are that Wolf does not explicitly teach of the gasket being an elastomeric material (claim 6) and further of a hot melt material (claim 7).

Use of silicone elastomeric gasket (i.e. a hot melt material) seals in battery terminals is known in the art as evidenced by Hooke (col. 4, ll. 60-65, as applied to claims 6 and 7).

Note that the specification does not provide specific materials apart from a generic hot melt elastomeric material.

The motivation for using a silicone gasket material in a terminal assembly is that it would provide an effective gasket seal between the terminal and the battery casing and prevent electrolyte from leaking out of the battery casing.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Wolf by selecting the gasket material to be silicone since it would have provided an effective gasket seal between the terminal and the battery casing and prevented electrolyte from leaking out of the battery casing. The selection of a known material based on its suitability for its intended use

supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). MPEP § 2144.07.

Response to Arguments

8. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Herein as well, Applicant argues limitations which are not explicitly recited in the instant claims. In particular that the ring is disposed on the inside of the case. Absent such explicit arrangement in the claims, this argument is not persuasive.

Claim Rejections - 35 USC § 103

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf in view of U.S. patent No. 4,076,908 (Bucker).

The teachings of claim 1 have been discussed above and are incorporated herein.

The differences between the instant claims and Wolf are that Wolf does not teach of providing a configuration which allows fluid to communicate between the case and groove of the terminal.

Bucker teaches that it is desirable to have the terminal and sealing area disposed in the acid to prevent terminal corrosion (col 2, ll 35-42).

The motivation for allowing the acidic electrolyte to communicate between the terminal and interior of the case is to prevent terminal corrosion.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Wolf by allowing the acidic electrolyte to communicate between the terminal and interior of the case since it would have prevented terminal corrosion.

Response to Arguments

10. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Herein as well, Applicant argues limitations which are not explicitly recited in the instant claims. In particular that the ring is disposed on the inside of the case. Absent such explicit arrangement in the claims, this argument is not persuasive.

Claim Rejections - 35 USC § 103

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf in view of U.S. patent No. 4,351,890 (Oxenreider).

The teachings of claim 1 have been discussed above and are incorporated herein.

The differences between the instant claims and Wolf are that Wolf does not explicitly teach of welding the ring and terminal together.

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Oxenreider teaches that it is known in the art to weld terminals to the casing (abstract).

Welding the terminal to the casing improves the sealing of the terminal and casing and also improves the anti-rotational properties of the terminal.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Wolf by welding the terminal and casing together since it would have improved the sealing of the terminal and casing and also improved the anti-rotational properties of the terminal.

Response to Arguments

12. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Applicant provides no further arguments to claim 10 apart from those drawn to claim 1, discussed above and incorporated herein.

Claim Rejections - 35 USC § 103

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf in view of Hooke and Bucker.

Wolf discloses a battery terminal to be secured to a battery case comprising: a terminal assembly extending along a main axis and including a threaded insert a threaded bore and an outer metal portion having a base with an annular flange configured to engage an inner surface of the case 11, a ring configured to be disposed

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over said terminal assembly; and an anti-rotation system including first set of angularly-spaced bosses 24 with intervening slots (defined by the edges 23) formed on an outer surface of the case 11, a second set of angularly-spaced bosses 26 with intervening slots on a first side of said ring facing said case and 11 which are complementary with said first set of bosses and slots, and a set of recesses 14 on a second side of said ring opposite said first side configured to receive portions of said terminal assembly (Figs. 1-3 as applied to claim 11).

The differences between the instant claims and Wolf are that Wolf does not teach of the gasket being an elastomeric material or providing a configuration which allows fluid to communicate between the case and groove of the terminal.

With respect to using an elastomeric seal:

Use of silicone elastomeric gasket (i.e. a hot melt material) seals in battery terminals is known in the art as evidenced by Hooke (col. 4, ll. 60-65, as applied to claims 6 and 7).

Note that the specification does not provide specific materials apart from a generic hot melt elastomeric material.

The motivation for using a silicone gasket material in a terminal assembly is that it would provide an effective gasket seal between the terminal and the battery casing and prevent electrolyte from leaking out of the battery casing.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Wolf by selecting the gasket

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material to be silicone since it would have provided an effective gasket seal between the terminal and the battery casing and prevented electrolyte from leaking out of the battery casing. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960). MPEP § 2144.07.

With respect to permitting fluid to communicate between the case and groove:

Bucker teaches that it is desirable to have the terminal and sealing area disposed in the acid to prevent terminal corrosion (col. 2, ll. 35-42).

The motivation for allowing the acidic electrolyte to communicate between the terminal and interior of the case is to prevent terminal corrosion.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of Wolf by allowing the acidic electrolyte to communicate between the terminal and interior of the case since it would have prevented terminal corrosion.

Response to Arguments

14. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Applicant provides no further arguments to claim 10 apart from those drawn to claim 1, discussed above and incorporated herein

Allowable Subject Matter

15. Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record appears to teach, suggest or render obvious the configuration of claim 9.

While it is held to be obvious to permit flow of the acidic electrolyte between the casing and terminal sealing means, none of the prior art of record appear to teach, suggest or render obvious the structural configuration of claim 9 wherein the communication means comprises a plurality of radially oriented bores extending from a radially outer surface of the base of the terminal assembly to the groove.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached at (571) 272-1292. FAX communications should be sent to FAX number: (703) 872-9306. FAXES received after 4 p.m. will not be processed until the following business day. Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gregg Cantelmo
Patent Examiner
Art Unit 1745

gc

A handwritten signature in cursive script, appearing to read "Gregg Cantelmo".

December 29, 2003